



National Weather Service

Storm Data and Unusual Weather Phenomena



August 1998

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

MICHIGAN, East

Lenawee County

Adrian	06	0450EST 0910EST			0	0	50K	Flood
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Washtenaw County

Ann Arbor	06	0500EST 0930EST			0	0	800K	Flood
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Oakland County

Novi to Southfield	06	0645EST 0940EST			0	0	500K	Flood
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Wayne County

Northville to Livonia	06	0645EST 0940EST			0	0	500K	Flood
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A warm front, oriented west to east, was located just south of Michigan during the early morning hours. A series of showers and thunderstorms developed just north of the front. These storms moved east, parallel to the warm front, in a typical train-echo pattern. The result was a classic heavy rain event for southeast Michigan. Some rainfall totals were: 5.7 inches in Hudson, 5.09 inches in Manchester, 4.12 inches in Ann Arbor, 3.78 inches in Farmington Hills, and 3.55 inches in Ypsilanti.

Southeast Michigan had been quite dry for the past month, and so the soil was able to absorb much of the heavy rain. As a result, flooding problems in rural areas were surprisingly minor, and largely confined to Lenawee County. A few vehicles left in flood prone locations overnight were swamped by high water in the morning.

Urban areas were an entirely different story. The increased area covered by impermeable surfaces, such as concrete and buildings, led to rapid runoff despite dry soil conditions. As a result, urban areas in the heavy rain swath saw substantial flooding, including Adrian and Ann Arbor. In Ann Arbor, Mallets Creek rose out of its banks. The creek destroyed sidewalks in the Briarwood Mall area, and swept three cars into a retention pond. Some flooding also took place on the Athletic (South) Campus of the University of Michigan.

Although rainfall totals were not as high, flooding also developed further east in the near northwest suburbs of Detroit. Flooded roads played havoc with the morning commute in Southfield, Troy, Livonia, Novi, and other cities. Parts of I-75, I-696, and Woodward Avenue (M-1), were closed. Basements were flooded in Farmington and Royal Oak, and several businesses in Farmington Hills experienced water damage. In Northville, a train derailed when it attempted to cross tracks that were washed out. Nineteen hundred gallons of diesel fuel was spilled as a result.

Runoff from the heavy rain resulted in some river flooding, mainly in the more urbanized basins (see below)

MIZ075

Washtenaw

06	1030EST				0	0		Flood
07	1130EST							

The Saline River at Saline went above flood stage of 10 feet at 1130 am EDT on the 6th. It crested at about 10.5 feet at 11 pm, then fell below flood stage at 1230 pm on the 7th.

MIZ070

Macomb

06	1100EST 2200EST				0	0		Flood
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The Clinton River near Fraser went above flood stage of 16 feet at noon EDT on the 6th. It crested at 16.6 feet at 2 pm, then fell below flood stage at 11 pm.



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MICHIGAN, East

MIZ076-076

Wayne

06 1730EST
07 1330EST

0

0

Flood

The Rouge River at Detroit went above flood stage of 15 feet at 630 pm EDT on the 6th. It crested at 17.4 feet at 1 am on the 7th, then fell below flood stage at 2 pm.

The Lower Rouge River at Inkster went above flood stage of 10 feet at 5 am EDT on the 7th. It crested at 10.1 feet at 530 am, then fell below flood stage at 230 pm.

Huron County

Bad Axe

08 1830EST

0

0

18K

Thunderstorm Wind (G52)

A isolated severe thunderstorm downed several trees and power lines. One large tree fell onto a house.

Macomb County

2 S Mt Clemens

09 1400EST
1850EST

0

0

300K

Flood

Shiawassee County

Corunna

09 1800EST

0

0

75K

Lightning

Oakland County

**Farmington to
Southfield**

09 1815EST
1955EST

0

0

10K

Flood

A warm and humid airmass blanketed southeast Michigan. Thunderstorms repeatedly developed in the afternoon along a lake breeze boundary off of Lake St Clair. These thunderstorms generated extremely heavy rainfall over a small portion of eastern Macomb County. National Weather Service radar estimated over eight inches of rain in the southern part of Clinton Township, near 15 Mile Road and Gratiot Avenue (M-3). An volunteer observer for a local television station measured 8.16 inches of rain near this location. This rain fell between 1 pm and 430 pm EDT.

Substantial urban flooding resulted in southern Clinton Township and southern Mt Clemens. Most roads in the immediate vicinity were closed due to high water, including Gratiot, Harper, Little Mack, and Metro Parkway. Cars stranded on Gratiot were up to their windshields in water, and numerous homes had flooded yards and basements. Minor urban flooding also took place in adjacent Harrison Township. More serious flooding in the area was averted because the areal extent of heavy rain was extremely small.

In the late afternoon and early evening hours, a band of showers and thunderstorms produced heavy rain in southern Oakland County. Rainfall amounts were generally less than two inches; however, this area had seen flood-producing rainfall just three days previous, and was thus vulnerable to any additional rain. High water closed many roads in southern Oakland County, with most of the flooding problems near the I-696 corridor.

Lightning struck the Shiawassee County complex early in the evening. The strike damaged computers, heating and cooling systems, and elevators at the courthouse.

Huron County

Harbor Beach

10 1400EST

0

0

6K

Thunderstorm Wind (G54)

Livingston County

4 NW Brighton

10 1530EST

0

0

1.5M

Lightning

Genesee County

4 WNW Flint Bishop Ar

10 1755EST

0

0

Thunderstorm Wind (G52)

Scattered, pulse-type thunderstorms developed ahead of a cold front moving south across lower Michigan. Two cells produced severe weather. A 62 mph gust was observed at the Harbor Beach Marina, and eight tightly packed trees were downed nearby. A



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MICHIGAN, East

television meteorologist reported 60 mph winds with a thunderstorm in Clayton Township, just west of Flint.

Lightning struck a building supply store northwest of Brighton late in the afternoon. The resulting fire completely destroyed the building.

Genesee County Clio

23	1850EST	0	0						Hail (1.00)
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Tuscola County Kingston

23	1930EST	0	0						Hail (0.88)
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Scattered thunderstorms developed in the afternoon along a thermal-moisture boundary. Two of the storms briefly became severe, producing marginally large hail.

Lenawee County 3 SSE Addison

24	0425EST	0	0			8K			Thunderstorm Wind (G55)
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Lenawee County 3 N Adrian to Adrian

24	0445EST	0	0			10K			Thunderstorm Wind (G55)
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Monroe County Temperance

24	0520EST	0	0			2K			Thunderstorm Wind (G52)
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An upper level disturbance acted on a warm and humid airmass, igniting a cluster of thunderstorms in southwest lower Michigan just after 3 am EDT. These storms raced to the east, affecting the southernmost tier of Michigan counties. Numerous trees were downed in western and central Lenawee County, while large limbs and power lines came down in southern Monroe County

Oakland County Southfield

25	0200EST	0	0			125K			Lightning
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Lightning struck an apartment building, causing a fire that destroyed two units and damaged the administrative office